Appl. No. 10/618,060
Amdt. dated January 22, 2007
Reply to Office Action of July 21, 2006

PATENT

REMARKS

Claims 16-32 were pending. The Applicant has amended claims 16 and 23-25 and cancelled claims 29 and 30. No new matter has been added.

In summary of the present Office Action, the Examiner has:

I.   Objected to the drawings;

II.   Rejected claims 16-31 under 35 U.S.C. §112;

III.   Rejected claims 16-27 and 29-31 under 35 U.S.C. §102; and

IV.   Rejected claim 28 under 35 U.S.C. §103.

The Applicant respectfully traverses these objections and rejections.

I.   Objection to the Drawings.

The Examiner has objected to the drawings under 37 C.F.R. 1.83(a) for failing to show every feature of claims 29 and 30. The Applicant has cancelled claims 29 and 30 and respectfully requests the withdrawal of this objection.

II.   Rejection of claims 16-31 under 35 U.S.C. §112.

The Examiner has rejected claim 16 because the claim terms "comparing" and "subset" are not clearly enabled by the specification. The Applicant respectfully disagrees.

The specification recites that "a union of the ACCEPT values from the first port and the GENERATE values of the second port is constructed." (Specification, p. 9, line 35- p.10, line 1). Then, "a union of the GENERATE values from the first port and the ACCEPT values of the second port is constructed." (Specification, p. 10, lines 5-7). "A common value set comprising the contents of the two unions is constructed (step AC), and examined to determine if it is empty (step AD)." (Specification, p. 10, lines 11-15).

Thus, the specification clearly enables constructing a common value set from the contents of two other sets (the two unions). As one must compare two sets to create a common value set, the Applicant's disclosure supports the claim element "comparing the sets of

alternative bus/communication protocols of the component ports to identify a subset of the sets

of alternative bus/communication protocols supported by all of the component ports."

Similarly, this same portion of the specification supports the claim element of "a

subset of the sets of alternative bus/communication protocols supported by all of the component

ports," because the "common value set" described in the specification is a subset of the two

union sets.

The Examiner has rejected claim 19 because the claim term "complementary

operation" is not clearly enabled by the specification. The Applicant respectfully disagrees.

The Applicant respectfully submits that the plain meaning of the term

"complementary" is well known to a person of ordinary skill of the art, and that in light of the

plain meaning of these terms and the specification, one skilled in the art would understand how

to make and/or use the invention.

The specification gives numerous examples of complementary operations. For

example, the specification states that "a port that generates 16-bit write operations can only be

connected to a port that accepts them." (Specification, p. 7, lines 17-19). In this example, a

write operation has a complementary read operation. In another example, "a union of the

ACCEPT values from the first port and the GENERATE values of the second port is

constructed." (Specification, p. 9, line 35- p.10, line 1). In this example, the ACCEPT values of

the first port are the complementary operations of the GENERATE values of the second port.

MPEP 2111.01 states that "during examination, the claims must be interpreted as

broadly as their terms reasonably allow. This means that the words of the claim must be given

their plain meaning unless applicant has provided a clear definition in the specification." (MPEP

8th Ed., Rev. 3, p. 2100-47). (Citations Omitted). "The ordinary and customary meaning of a

claim term is the meaning that the term would have to a person of ordinary skill in the art in

question at the time of the invention, i.e., as of the effective filing date of the patent application."

Phillips v. AWH Corp., 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc).

Moreover, although applicants may use the specification to act as their own

lexicographers, there is nothing that requires an application's specification to explicitly define

claim terms. For example, in ACTV, Inc. v. The Walt Disney Company, the claim at issue

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recited a "uniform resource locator" or URL. 346 F.3d 1082 (Fed. Cir. 2003). Although the patentee did not provide a definition of URL in the specification, the Court held that the term should be given its broadest reasonable interpretation and take on the ordinary and customary meaning attributed to it by those of ordinary skill in the art. Id. at 1092. See MPEP 8th Ed., Rev. 3, p.2100-49.

Similarly, although the Applicant may not have explicitly defined the word "complementary" in the specification, the Applicant is entitled to rely on the ordinary and customary meaning attributed to this term by those of ordinary skill in the art at the time of the invention to give the claims the broadest reasonable interpretation.

The Examiner has also rejected claim 16 as indefinite because "comparing the sets of alternative bus/communication protocols of the component ports" is unclear as to what the sets are compared with. The Applicant respectfully disagrees and submits that from the plain meaning of the claim language and the specification, it is clear that the claim 16 compares the sets of alternative bus/communication protocols with themselves to "identify a subset of the sets of alternative bus/communication protocols supported by all of the component ports."

The Examiner has also rejected claim 16 because the claim term "subset" is not defined in the claim. As amended, claim 16, recites "a subset of the sets of alternative bus/communication protocols." The Applicant respectfully submits that this usage of "subset" in amended claim 16 satisfies the definiteness requirement of 35 U.S.C. §112(2).

The Examiner has also rejected claims 17-22 as indefinite for the claim terms of "first one," "parameter values," "operation," "connection value(s)," "role value(s)." The Examiner states that it is unclear as to what these terms encompass.

The Applicant respectfully disagrees. The specification states that in an embodiment of the invention, a bus/communication protocol includes "parameters," "operations," "connections," and "roles." (Specification p. 6, lines 28-32). Each of these aspects of a protocol can be defined with one or more values, as illustrated by the code examples on p. 7, lines 1-4; p. 7, lines 21-25; p. 8, lines 4-10; and p. 8, lines 26-30. In light of the Applicant's disclosure, the Applicant respectfully submits that the scope of the claim terms "parameter values," "operation," "connection value(s)," and "role value(s)" is clearly defined.

With regard to the claim term "first one," claim 17 clearly defines a "set of alternative bus/communication protocols." A "first one" refers to one of the alternative bus/communication protocols included in this set. "The use of the terms "first" and "second" is a common patent-law convention to distinguish between repeated instances of an element or limitation." 3M Innovative Props. Co. v. Avery Dennison Corp., 350 F.3d 1365, 1371 (Fed. Cir. 2003). (See MPEP 2111.03). The use of "first one" is not intended to imply any sequence or order.

Claims 23-25 have been amended to provide an antecedent basis.

The Applicant respectfully submits that claims 16-28 and 31 satisfies the requirements of 35 U.S.C. §112 and respectfully request the withdrawal of these rejections.

III.   Rejection of claims 16-28 and 29-31 under 35 U.S.C. §102 and §103.

The Examiner has rejected claims 16-27 and 29-31 as anticipated by Raghunathan, U.S. Patent No. 6,694,488; Pasumansky, U.S. Patent. No. 6,826639; and Axberg, U.S. Pat. No. 6,009,466.

The Applicant respectfully submits that the Office Action fails to specify as nearly as practicable the particular parts of the references relied upon for the rejection. Rejection of Claims 37 C.F.R. Section 1.105(c)(2) states that "when a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable."

The Applicant respectfully submits that the Office Action fails to specify as nearly as practicable the particular parts of the references relied upon for the rejection. For example, the Office Action states that every element of claim 16 is rejected in view of figures 1-5, 8, 10-12, and 15-17 of Raghunathan; figures 1, 4-5, 7, abstract, and summary of Pasumansky; and figures 10-12 of Axberg. The Office Action does not specify which elements of these figures correspond with specific claims elements.

Because the Office Action does not specify where these elements can be found in the cited references, the Applicant have been forced to guess at plausible grounds for the rejections of claims 16-27 and 29-31.

Appl. No. 10/618,060
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Upon extensive review of the cited references, Applicants respectfully submit that none of the references disclose all of the elements of the claims.

With regard to Raghunathan, claim 16 recites "for each of the component ports, identifying a set of alternative bus/communication protocols supported by the component port." As stated by claim 16, each component port supports one or more alternative bus/communication protocols.

In contrast, Raghunathan discloses adding additional circuits to interface components, rather than relying on the bus/communication protocols directly supported by component ports. Raghunathan states "the present technique is based on the addition of a layer of circuitry, called the Communication Architecture Tuner (CAT), to each component. The CAT monitors and analyzes the internal state of, and communication transactions generated by, a system component and predicts the relative importance of communication transactions. . . . The results of the analysis are used by the CAT to configure the parameters of the underlying communication architecture." (6:8-17).

Pasumansky discloses a system for "displaying communication data transmitted according to a communications protocol standard having a plurality of protocol levels." (3:51-54). Pasumansky discloses a system for displaying data communicated according to a communications protocol. Pasumansky does not disclose anything related to designing or selecting between alternative communication buses between electronic components or their protocols, let alone "a system design method . . . to implement connections between the components via the component ports," as recited by claim 16.

Axberg discloses "a network configuration program assist[ing] a user in planning the configuration of devices in an information processing network. Preferably, a planning function is part of a storage management program for managing a network of storage devices." (Abstract). There is nothing in Axberg pertaining to the design of integrated circuits.

Figure 10 of Axberg illustrates a flowchart "to plan the configuration of a bus within a storage network." (4:1-3). Figure 10 of Axberg discloses selecting a port to connect two devices. Axberg discloses that "as part of the device selection process, the program determines the number of ports in the selected device which are available for use." (12:45-47). However,

once Axberg selects a port, it does not configure the bus/communication protocol of this connection.

In contrast, claim 16 recites "for each of the component ports, identifying a set of alternative bus/communication protocols supported by the component port; ... and selecting one of the subset of the bus/communication protocols to implement connections between the components via the component ports."

The Applicants respectfully submit that claim 16 is patentable over the cited references. Claims 17-28 and 31 are patentable over the cited references by virtue of their dependence on a patentable independent claim.

CONCLUSION

In view of the foregoing, Applicant believe all claims now pending in this Application are patentable and in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

The Applicant invites the Examiner to contact the undersigned if he believes a telephone conference would expedite the prosecution of this application.

Respectfully submitted,

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